



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,638	03/29/2004	Mario Abdenhour	25669-014 CIP CON	3493

30623 7590 03/08/2007  
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY  
AND POPEO, P.C.  
ONE FINANCIAL CENTER  
BOSTON, MA 02111

EXAMINER

BUMGARNER, MELBA N

ART UNIT PAPER NUMBER

3732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/812,638

Applicant(s)

ABDENNOUR ET AL.

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1/17/07.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not describe a rigid polymer vehicle nor rigid polymer.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 6, 21, and 22 are rejected as understood, under 35 U.S.C. 102(b) as being anticipated by Goodson (4,892,736). Goodson discloses a fiber comprising a polymer vehicle having incorporated therein one or more medicaments wherein the fiber has a size and shape suitable for placement in a root canal (column 3 line 30). Patentable weight is not given to the intended use of the fiber. It is noted that the fiber having the shape of a fiber having the size of a diameter of about 0.1 to about 1mm would be suitable for placement in a root canal. The medicament is antibiotic of tetracycline (column 6 line 37). Goodson shows a combination of

Art Unit: 3732

antibiotic and anti-inflammatory agent (column 6 line 53). Goodson shows the fiber impregnated with the medicament (column 3 line 26).

5. Claims 1-3, 5-14, and 21-26 are rejected as understood, under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al. (JP Pub S63303922). Miyazaki et al. disclose a fiber comprising a polymer vehicle having incorporated therein one or more medicaments. The medicament includes antibiotic of clindamycin. Miyazaki et al. show a combination of antibiotic and anti-inflammatory agent. Miyazaki et al. show a method of obtaining the fiber having incorporated therein medicament and/or anti-inflammatory agent, positioning the fiber in the root canal, and maintaining the fiber at the treatment site. The fiber is impregnated with the medicament(s).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Goodson in view of Damani (5,114,718). Goodson discloses a fiber that shows the limitations as described above and the polymer vehicle is an ethylene vinyl acetate copolymer (column 4 line 63) having a diameter of 0.1 to about 1 mm; however, Goodson does not show medicament of clindamycin. Damani teaches devices providing medicament of clindamycin (column 2 line 65) as well as tetracycline (column 2 line 64). It would have been obvious to one having ordinary skill in the art to incorporate medicament of clindamycin to the fiber of Goodson, since Damani

discloses both as known antibiotics. As to the dose of antibiotic, Damani teaches steady state average concentrations of medicament of about 10  $\mu\text{g}$  to 5000  $\mu\text{g}$  per device.

8. Claims 7-14 and 23-26 are rejected as understood, under 35 U.S.C. 103(a) as being unpatentable over Goodson. Goodson discloses obtaining a fiber having one or more medicaments incorporated therein that is suitable for intracanal use, positioning the fiber such that the fiber is in direct contact with a treatment site, and maintaining the fiber at the treatment site, wherein the medicament is delivered to the treatment site at a controlled rate (column 2 line 56); however, Goodson does not show the step of the fiber in the root canal. It would have been obvious to one of ordinary skill in the art to do so, since one skilled in the art would recognize that the fiber of Goodson is of size and characteristics sufficient for positioning in a root canal and Goodson shows method of localized treatment within the oral cavity.

9. Claims 15-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodson in view of Hoyt et al. (4,003,810). Goodson discloses a fiber as described above and of ethylene vinyl acetate copolymer (column 4 line 63); however, Goodson does not show less than about 20% vinyl acetate. Hoyt et al. disclose a fiber (column 3 line 7) of ethylene vinyl acetate copolymer comprising 3 to 50 percent vinyl acetate. It would have been obvious to one of ordinary skill in the art as to the specific amount of a known material; where the composition of the fiber is disclosed, discovering the optimum or workable ranges involves only routine skill in the art.

10. Claims 4, 15-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. in view of Goodson. Miyazaki et al. disclose a fiber as described above and polymer vehicle such as methylmethacrylate and polyvinylacetal; however, they do not show

Art Unit: 3732

polymer vehicle of copolymer of ethylene vinyl acetate. Goodson teaches a dental fiber of ethylene vinyl acetate copolymer. It would have been obvious to one of ordinary skill in the art the time the invention was made to modify the polymeric mix of Miyazaki et al. to include copolymer of ethylene vinyl acetate in order to use a semipermeable biocompatible polymer. It would have been obvious to one of ordinary skill in the art as to the specific amount of a known material; where the composition of the fiber is disclosed, discovering the optimum or workable ranges involves only routine skill in the art.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709.

The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner  
Primary Examiner